

Director of Central Intelligence



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Special National Intelligence Estimate
Memorandum to Holders



Soviet Submarine Warfare Trends



Key Judgments

~~Top Secret~~

SNIE 11-20-84JXW

January 1987

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The Deputy Director of Central Intelligence

Washington, D. C. 20505

1 4 JAN 1987

MEMORANDUM FOR: Recipients of Key Judgments

SUBJECT: Transmittal of Memorandum to Holders
of SNIE 11-20-84,
Soviet Submarine Warfare Trends

1. There are certain key findings in this updated Estimate on Soviet submarines that are highly relevant to ongoing policy issues. Advances the Soviets have made in their submarine warfare capabilities, noted in the Memorandum, need to be taken into account in US war planning, acquisition of new weapon systems, and formulation of arms control negotiation policy.

2. I want to emphasize certain key findings:

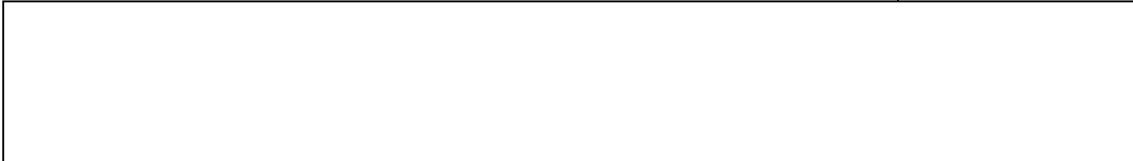
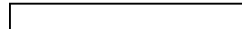
--Technology transfer has been a significant factor in Soviet improvements, especially in submarine quieting and torpedo design, and in some cases such transfers have been "legal", that is, not embargoed technology.

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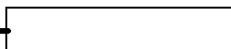


3. Neither this Memorandum to Holders nor the original SNIE is a net assessment of US vs. Soviet submarine capabilities.

A handwritten signature in black ink, appearing to read "Robert M. Gates".

Robert M. Gates
Acting Director of Central Intelligence

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THIS ESTIMATE IS ISSUED BY THE DIRECTOR OF CENTRAL INTELLIGENCE.

THE NATIONAL FOREIGN INTELLIGENCE BOARD CONCURS, EXCEPT AS NOTED IN THE TEXT.

The following intelligence organizations participated in the preparation of the Estimate:

The Central Intelligence Agency, the Defense Intelligence Agency, the National Security Agency, and the intelligence organization of the Department of State.

Also Participating:

The Assistant Chief of Staff for Intelligence, Department of the Army
The Director of Naval Intelligence, Department of the Navy
The Assistant Chief of Staff, Intelligence, Department of the Air Force
The Director of Intelligence, Headquarters, Marine Corps

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PROPIN-	Caution—Proprietary Information Involved
ORCON-	Dissemination and Extraction of Information Controlled by Originator
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SNIE 11-20-84JXW

Memorandum to Holders of SNIE 11-20-84
SOVIET SUBMARINE WARFARE TRENDS

KEY JUDGMENTS

The full text of this Memorandum to
Holders is being published separately
with regular distribution.

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~~Top Secret~~ [redacted]

SCOPE NOTE

This memorandum updates and supplements SNIE 11-20-84, *Soviet Submarine Warfare Trends*, but does not replace it. Many of the basic judgments in the SNIE remain valid. This memorandum, however, highlights significant new developments in Soviet ability to conduct undersea warfare that have taken place since the SNIE's information date of December, 1984. It also introduces changes to the Key Judgments of the original study based on new information. Neither this Memorandum to Holders nor the SNIE is a net assessment of US versus Soviet submarine capabilities. [redacted]

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KEY JUDGMENTS

Since SNIE 11-20-84, *Soviet Submarine Warfare Trends*, was approved for publication in December 1984, new information and analysis have developed that indicate significant changes in some of the judgments are required. In some areas of submarine warfare—particularly quieting—the Soviets are advancing more quickly than we predicted and in other areas—particularly production of submarines—they are not proceeding as quickly. On balance, we are more concerned about Soviet capabilities to conduct submarine warfare over the next 10 years than we were in 1984.

The potentially most serious developments include:

— *Quieting and Acoustic Advantage*. Since the SNIE was published we have determined that one new submarine class, the Akula, has achieved a quieting level [] that we predicted the Soviets would not achieve until the early 1990s. These quieting improvements will seriously reduce the effectiveness of all current Western ASW systems, but we cannot evaluate effects on programed US system improvements. Such quieting improvement will make detection of newer classes of Soviet submarines more difficult, []

[] Although the Soviets have made impressive progress in narrowing the acoustic advantage of US submarines, they still have quieting and sonar problems. []

[] Also, the United States will maintain a significant advantage in numbers of quiet

submarines through at least the mid-1990s. Significant acoustic advantage usually provides the telling margin of superiority in submarine encounters. [redacted]

- **Accuracy.** The Soviets achieved better accuracy with their newest submarine-launched ballistic missile (SLBM), the SS-N-23, including the possibility of achieving a hard-target kill capability, sooner than we predicted in the SNIE. [redacted]

- **Operations.** Soviet operations and testing indicate more emphasis on deployment of strategic and attack submarines in the Arctic than was noted in the SNIE. Some of these actions suggest the USSR intends to conduct some under-ice operations beyond the traditional bastion areas—well into the deep Arctic. This could improve SSBN survivability and affect how the United States conducts its ASW operations.

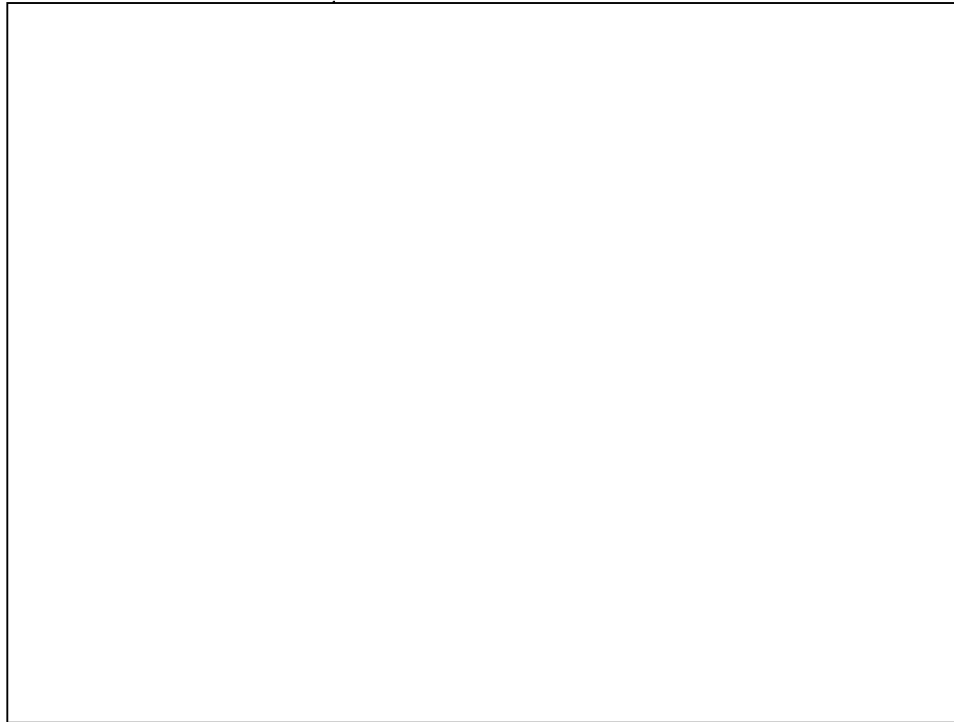
- *Technology Transfer.* Further evidence shows that technology transfer of both design and manufacturing technology has had more of an impact on improving the Soviet submarine force than we estimated in the SNIE. [redacted]
[redacted]

Important changes in submarine warfare trends that lessen our previous concerns are:

- “A commitment to building substantially improved submarines at about the same pace as the last decade . . .”*
- Although the Soviets expanded their shipbuilding capacity during the 1970s, they have reduced the pace of submarine production since the late 1970s. The construction rates of the late 1970s may not be achieved again until at least the early 1990s. We are, therefore, now projecting the production of some 14 fewer units (from 40 to 26) by 1996 of their newest classes of SSNs than we projected in the SNIE.
 - “Maximum speeds in the 35- to 40-knot range for some of the newest SSNs . . .”*
- It now appears the newest SSNs do not have the high-speed capabilities of the Alfa-class. The Soviets may develop a new high-speed SSN in the 1990s, but the latest generation of SSNs—the Mike, Sierra, and Akula classes—probably has maximum speeds in the 30- to 32-knot range. The Soviets apparently are emphasizing quieting over speed improvements.
 - “Introduction of long-range, land-attack cruise missiles . . .”*
- We see slow progress toward the deployment of long-range submarine-launched cruise missiles (SLCMs). We judge the Soviets could begin deploying the subsonic SS-NX-21 in 1987, if they chose to do so. The supersonic SS-NX-24, however, is little closer to deployment today than we had estimated in 1984.³ Since the SNIE the Soviets launched a converted Yankee, the 402AA, that we judge will likely be a dedicated platform for the SS-NX-21.⁴ We are uncertain, however, about Soviet plans for deployment and operation of both the SS-NX-21 and the SS-NX-24 SLCMs.

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Important enigmas have developed since the SNIE. These may have a major impact on the Soviet submarine force that we cannot predict at present:



The Soviets have under way a substantial and continuous effort to improve their capability to conduct submarine warfare. We judge the greatest benefit from the developments we have observed will be in enhanced protection of their SSBNs, and a marked improvement in their submarines' abilities to strike carrier battle groups and other surface ships armed with land-attack cruise missiles. New analysis reinforces our judgment that the newest Soviet submarines may make some current Western ASW weapons obsolete, and may require a significant—and potentially expensive—Western response. We now judge production rates of Soviet SSBNs will probably not increase to any extent, and that by the late 1990s or early 2000s the Soviets are likely to have fewer than 62 SSBNs. We continue to hold that Soviet submarines will not be capable of attacking any more than a few US SSBNs, and possibly none, because of continued inability to reliably detect and track these units in the open ocean. We are now somewhat more concerned about our ability to detect in a timely manner Soviet breakthroughs in submarine warfare that might add significantly to Soviet capabilities. [redacted]